In the claims:

Please cancel Claims 1-20, without prejudice, and add new claims 21-43 as shown below. According to the proposed revisions to 37 CFR 1.121 as described in the PTO notice 02/13/03, a complete listing of all claims in the application is provided below along with a current status for each claim.

Claims 1-20   (Canceled)

21.   (New): A method for retrieving digital video stored in memory comprising:

(a)   obtaining a specific start time of at least a portion of digital video represented as a t-coordinate;

(b)   selecting a minimum n-coordinate and a maximum n-coordinate to bound a specific start location of the digital video represented as a n-coordinate;

(c)   obtaining a minimum t-coordinate based on the minimum n-coordinate;

(d)   obtaining a maximum t-coordinate based on the maximum n-coordinate;

(e)   deriving a linear reference between the minimum n and t coordinates and the maximum n and t coordinates;

(f)   obtaining a reference n-coordinate lying on the linear reference based on the t-coordinate;

(g)   determining a reference t-coordinate lying on a non-linear monotonic, function, representing digital video stored over time, based on the reference n-coordinate;

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(h)   determining whether the reference t-coordinate is substantially similar to the t-coordinate;

(i)   when the reference t-coordinate is substantially similar to the t-coordinate, determining that the reference n-coordinate is substantially equal to the n-coordinate, wherein the t-coordinate and the n-coordinate define a starting point of digital video; and

(j)   retrieving from memory the digital video based on the starting point.

22.   (New):   The method of claim 21 further comprises, when the reference t-coordinate is not substantially similar to the t-coordinate,

(a)   determining whether the reference t-coordinate is greater than the t-coordinate;

(b)   when the reference t-coordinate is greater than the t-coordinate, redefining the maximum t-coordinate to equal the reference t-coordinate to produce a first maximum t-coordinate;

(c)   determining a first maximum n-coordinate lying on the non-linear monotonic function based on the first maximum t-coordinate;

(d)   deriving a first linear reference between the minimum n and t coordinates and the first maximum n and t coordinates;

(e)   obtaining a first reference n-coordinate lying on the first linear reference based on the t-coordinate;

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(f)   determining a first reference t-coordinate lying on the non-linear monotonic function based on the first reference n-coordinate;

(g)   determining whether the first reference t-coordinate is substantially similar to the t-coordinate; and

(h)   when the first reference t-coordinate is substantially similar to the t-coordinate, determining that the first reference n-coordinate is substantially equal to the n-coordinate.

23.   (New)   The method of claim 21 further comprises, when the reference t-coordinate is not substantially similar to the t-coordinate;

(a)   determining whether the reference t-coordinate is less than the t-coordinate;

(b)   when the reference t-coordinate is less than the t-coordinate, redefining the minimum t-coordinate to equal the reference t-coordinate to produce a first minimum t-coordinate;

(c)   deriving a first linear reference between the first minimum n and t coordinates and the maximum n and t coordinates;

(d)   obtaining a first reference n-coordinate lying on the first linear reference based on the t-coordinate;

(e)   determining a first reference t-coordinate lying on the non-linear monotonic function based on the first reference n-coordinate;

(f)   determining whether the first reference t-coordinate is substantially similar to the t-coordinate; and

(g)   when the first reference t-coordinate is substantially similar to the t-coordinate, determining that the first reference n-coordinate is substantially equal to the n-coordinate.

24.   (New) The method of claim 21, wherein the t-coordinate comprises a time stamp value associated with a beginning of a video program stored in a video file and wherein the n-coordinate comprises a byte count value associated with the beginning of the video program.

25.   (New) The method of claim 24, wherein the video file comprises MPEG video data and MPEG audio data.

26.   (New) A method for retrieving digital video stored in memory comprising:

(a)   obtaining a specific start time of digital video represented as a t-coordinate;

(b)   selecting a minimum point and a maximum point that bound the starting point, wherein the minimum point and the maximum point lie on a non-linear monotonic function, representing digital video stored over time;

(c)   deriving a linear reference between the minimum and the maximum points;

(d)   obtaining a reference n-coordinate lying on the linear reference based on the t-coordinate;

(e)   determining a reference t-coordinate lying on the non-linear monotonic function based on the reference n-coordinate;

(f)   determining whether the reference t-coordinate is substantially similar to the t-coordinate;

(g)   when the reference t-coordinate is not substantially similar to the t-coordinate, redefining the minimum point or the maximum point based on the reference t-coordinate;

(h)   repeating steps (b) through (g) until the reference t-coordinate is substantially similar to the t-coordinate;

(i)   when the reference t-coordinate is substantially similar to the t-coordinate, determining that the reference n-coordinate is substantially equal to a specific start location of digital video represented as the n-coordinate, wherein the t-coordinate and the n-coordinate define the starting point; and

(j)   retrieving from memory the digital video based on the starting point.

27.   (New)   The method of claim 26, wherein step (g) comprises, when the reference t-coordinate is not substantially similar to the t-coordinate,

(a)   redefining the minimum point to correspond to the reference t-coordinate and the reference n-coordinate, when the reference t-coordinate is less than the t-coordinate.

28.   (New)   The method of claim 26, wherein step (g) further comprises, when the reference t-coordinate is not substantially similar to the t-coordinate,

(a)   redefining the maximum point to correspond to the reference t-coordinate and the reference n-coordinate, when the reference t-coordinate is greater than the t-coordinate.

29.   (New) The method of claim 26, wherein the t-coordinate comprises a time stamp value associated with a beginning of a video program stored in a video file and wherein the n-coordinate comprises a byte count value associated with the beginning of the video program.

30.   (New) The method of claim 29, wherein the video file comprises MPEG video data and MPEG audio data.

31.   (New) An apparatus for retrieving digital video stored in memory comprising:

(a)   a processing module; and

(b)   memory operably coupled to the processing module, wherein the memory includes operational instructions that cause the processing module to: (i) obtain a specific start time of at least a portion of digital video represented as a t-coordinate; (ii) select a minimum n-coordinate and a maximum n-coordinate to bound a specific start location of digital video represented as a n-coordinate; (iii) obtain a minimum t-coordinate based on the minimum n-coordinate; (iv) obtain a maximum t-coordinate based on the maximum n-coordinate; (v) derive a linear reference between the minimum n and t coordinates and the maximum n and t coordinates; (vi) obtain a reference n-coordinate lying on the linear reference based on the t-coordinate; (vii) determine a reference t-coordinate lying on a non-linear monotonic function, representing digital video stored over time, based on the reference n-coordinate; (viii) determine whether the reference t-coordinate is substantially similar to the t-coordinate; (ix) when the reference t-coordinate is substantially similar to the t-coordinate, determine that the reference n-

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coordinate is substantially equal to the n-coordinate, wherein the t-coordinate and the n-coordinate define a starting point of digital video; and (x) retrieve from memory the digital video based on the starting point.

32.   (New)   The apparatus of claim 31, wherein the memory further comprises operational instructions that cause the processing module to, when the reference t-coordinate is not substantially similar to the t-coordinate,

(a)   determine whether the reference t-coordinate is greater than the t-coordinate;

(b)   when the reference t-coordinate is greater than the t-coordinate, redefine the maximum t-coordinate to equal the reference t-coordinate to produce a first maximum t-coordinate;

(c)   determine a first maximum n-coordinate lying on the non-linear monotonic function based on the first maximum t-coordinate;

(d)   derive a first linear reference between the minimum n and t coordinates and the first maximum n and t coordinates;

(e)   obtain a first reference n-coordinate lying on the first linear reference based on the t-coordinate;

(f)   determine a first reference t-coordinate lying on the non-linear monotonic function based on the first reference n-coordinate;

(g)   determine whether the first reference t-coordinate is substantially similar to the t-coordinate; and

(h)   when the first reference t-coordinate is substantially similar to the t-coordinate, determine that the first reference n-coordinate is substantially equal to the n-coordinate.

33.   (New)   The apparatus of claim 31, wherein the memory further comprises operational instructions that cause the processing module to, when the reference t-coordinate is not substantially similar to the t-coordinate,

(a)   determine whether the reference t-coordinate is less than the t-coordinate;

(b)   when the reference t-coordinate is less than the t-coordinate, redefine the minimum t-coordinate to equal the reference t-coordinate to produce a first minimum t-coordinate;

(c)   determine a first minimum n-coordinate lying on the non-linear monotonic function based on the first minimum t-coordinate;

(d)   derive a first linear reference between the first minimum n and t coordinates and the maximum n and t coordinates;

(e)   obtain a first reference n-coordinate lying on the first linear reference based on the t-coordinate;

(f)   determine a first reference t-coordinate lying on the non-linear monotonic function based on the first reference n-coordinate;

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(g)   determine whether the first reference t-coordinate is substantially similar to the t-coordinate; and

(h)   when the first reference t-coordinate is substantially similar to the t-coordinate, determine that the first reference n-coordinate is substantially equal to the n-coordinate.

34.   (New) The apparatus of claim 31, wherein the t-coordinate comprises a time stamp value associated with a beginning of a video program stored in a video file and wherein the n-coordinate comprises a byte count value associated with the beginning of the video program.

35.   (New) The apparatus of claim 34, wherein the video file comprises MPEG video data and MPEG audio data.

36.   (New) An apparatus for retrieving digital video stored in memory comprising:

(a)   a processing module; and

(b)   memory operably coupled to the processing module, wherein the memory includes operational instructions that cause the processing module to: (i) obtain a specific start time of digital video represented as a t-coordinate; (ii) select a minimum point and a maximum point that bound the starting point, wherein the minimum point and the maximum point lie on a non-linear monotonic function representing digital video stored over time; (iii) derive a linear reference between the minimum and the maximum points; (iv) obtain a reference n-coordinate lying on the linear reference based on the t-coordinate; (v) determine a reference t-coordinate lying on the non-linear monotonic function based on the reference n-coordinate; (vi) determine

whether the reference t-coordinate is substantially similar to the t-coordinate; (vii) when the reference t-coordinate is not substantially similar to the t-coordinate, redefine the minimum point or the maximum point based on the reference t-coordinate; (viii) repeat steps (ii) through (vii) until the reference t-coordinate is substantially similar to the t-coordinate; (ix) when the reference t-coordinate is substantially similar to the t-coordinate, determine that the reference n-coordinate is substantially equal to a specific start location of digital video represented at the n-coordinate, wherein the t-coordinate and the n-coordinate define the staring point; and (x) retrieve from memory the digital video based on the starting point.

37.   (New)   The apparatus of claim 36, wherein the memory further comprises operational instructions that cause the processing module to, when the reference t-coordinate is not substantially similar to the t-coordinate,

        (a)   redefine the minimum point to correspond to the reference t-coordinate and the reference n-coordinate, when the reference t-coordinate is less than the t-coordinate.

38.   (New)   The apparatus of claim 36, wherein the memory further comprises operational instructions that cause the processing module to, when the reference t-coordinate is not substantially similar to the t-coordinate,

        (a)   redefine the maximum point to correspond to the reference t-coordinate and the reference n-coordinate, when the reference t-coordinate is greater than the t-coordinate.

39.   (New)   The apparatus of claim 36, wherein the t-coordinate comprises a time stamp value associated with a beginning of a video program stored in a video file and wherein

the n-coordinate comprises a byte count value associated with the beginning of the video program.

40.   (New) The apparatus of claim 39, wherein the video file comprises MPEG video data and MPEG audio data.

41.   (New) A method for retrieving digital video comprising:

(a)   receiving viewing input data representing a desired start point of stored digital video and wherein the stored digital video is stored in memory in a non-linear monotonic fashion; and

(b)   retrieving from memory at least a portion of the stored digital video based on the viewing input data and based on a successive linear approximation operation.

42.   (New) The method of claim 41, including:

(a)   determining a start memory location from which to retrieve at least a portion of the stored digital video based on the viewing input data and based on the successive linear approximation operation.

43.   (New) The method of claim 42, wherein the stored digital video comprises MPEG video data and MPEG audio data.